

EXHIBIT A

Written Report of Professor Justin Steil, Ph.D.

DHD Jessamine LLC

v.

Florence County, South Carolina, et al.

United States District Court for the District of South Carolina

Case No. 22 CV 01235

Analysis of Impact and Effects on Segregation

Expert Report Prepared by
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July 25, 2023

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I. EXECUTIVE SUMMARY

This report contains my expert opinion regarding the effect of the Florence County Council's moratorium, enacted in Florence County Ordinance No. 17-2021/22, and Florence County's related actions with regard to the proposed Jessamine Low-Income Housing Tax Credit (LIHTC) development on the parcels at 421 South Cashua Drive in Florence County, South Carolina (Parcels 90018-03-006, -007, -008) on (1) access to housing by groups protected by the Fair Housing Act and (2) the perpetuation of segregation by race.

My review of the documents and data available to me indicate that the moratorium and related actions had a statistically significant adverse impact in making housing unavailable on the basis of race. My review of the documents and data available to me also indicate that the moratorium and related actions perpetuated segregation on the basis of race in Florence County. Florence County's actions blocking The Jessamine project denied Black residents of Florence County access to neighborhoods that provide significant long-term benefits beyond stable housing and obstructed the Fair Housing Act's goals of increasing access to safe, affordable housing in neighborhoods with high levels of place-based resources.

As discussed in more detail below, I evaluated the available data in three different ways consistent with courts' analyses of disparate impacts to assess whether Florence County's policies and practices had an adverse impact on the basis of race. The results of all three tests found that it did.

The first method compares the proportion of protected-class members adversely affected by the challenged policy to the proportion of persons not belonging to a protected class who are adversely affected. Here, the County's actions blocking the LIHTC project and rezoning the

parcel for single-family homes adversely affected 96 percent or more of the potential Black residents compared to roughly 40 percent of potential white residents, a difference of 56 percentage points.

A second approach tests whether the estimated Black “selection rate” into potential single-family homes consistent with the rezoning of the parcels relative to the pool of potential residents for those and the LIHTC development is less than four-fifths of the white selection rate. Here, the Black selection rate is .04, roughly *four out of one hundred*, compared to a white selection rate of .59, roughly *six out of ten*. The selection rate for Black homeseekers under this policy is substantially less than four-fifths the rate for white homeseekers.

The third approach measures the likelihood that the difference between the composition of the estimated residents of single-family homes consistent with the rezoning and the estimated composition of the blocked LIHTC development could have occurred by chance. With greater than 99.999% certainty, the difference between the expected racial composition attributable in The Jessamine development compared to the expected racial composition of units that could be built after the moratorium and related rezoning would not occur by chance.

No matter which test one uses, the statistical evidence overwhelmingly shows that the County’s actions had an adverse impact on Black residents, making housing disproportionately unavailable to Black residents.

By denying housing in which more than three out of four (78 percent) or more of residents would likely have been Black in a Census Tract or neighborhood that is overwhelmingly white (80 percent or more), the County’s moratorium and related actions perpetuate residential segregation on the basis of race and deny residents the benefits of living in an integrated community.

II. BACKGROUND TO THE REPORT

a. Questions Presented

The Fair Housing Act provides that it “is the policy of the United States to provide, within constitutional limitations, for fair housing” throughout the nation and prohibits making housing unavailable or discriminating in the provision of housing related services on the basis of race, color and other protected characteristics. 42 U.S.C. §§ 3601 et seq. In light of this policy, I have been asked to assess the effect of the Florence County Council’s moratorium, enacted in Florence County Ordinance No. 17-2021/22, and related actions with regard to the parcels at = 421 South Cashua Drive in Florence County, South Carolina on the availability of housing to groups protected by the Fair Housing Act and on the perpetuation of residential segregation by race.

b. Geographic and Demographic Context

The parcels at issue here are in Census Tract 12 in Florence County, South Carolina. The parcels are unincorporated parts of Florence County, surrounded on all sides by Florence City. The neighborhood where the parcels are located is a neighborhood with a substantially higher share of white residents than the Florence City, Florence County, or state averages, as seen in Table 1.

Table 1: Racial and Ethnic Composition of Relevant Geographies in 2020 (U.S. Census Bureau 2020 Decennial Census DPI)

	Tract 12	Florence City	Florence County	South Carolina
White Non-Hispanic	0.80	0.45	0.50	0.62
Black Non-Hispanic	0.13	0.47	0.41	0.25
Hispanic	0.02	0.03	0.03	0.07
Asian American	0.01	0.02	0.02	0.02
Other	0.03	0.03	0.03	0.04

The neighborhood has a higher median income, higher homeownership rate, and higher average educational attainment than Florence City, Florence County or South Carolina, on average. The neighborhood also has a lower unemployment rate, lower share of families with children in poverty, and lower share of single female-headed households with children than Florence City, Florence County or South Carolina, on average.

Table 2: Socioeconomic Characteristics of Relevant Geographies (U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates)

	Tract 12	Florence City	Florence County	South Carolina	Source
Median Household Income	\$85,000	\$52,425	\$51,902	\$58,234	DP03
Homeownership Rate	74.9	58.1	64.6	70.3	DP04
% BA or Higher	30.3	17.8	15.3	18.6	DP02
Unemployment Rate	1.7	4.3	4.6	5.3	DP03
% Families with Children <18 in Poverty	2.4	19.7	18.4	16.9	DP03
% Female Head of Household No Spouse/Partner w Children under 18	2.6	10.2	7.2	6.0	DP02

As discussed further below, these characteristics of the neighborhood make it an especially valuable site for a LIHTC development that can advance racial and economic integration and support socio-economic mobility for low-income families.

c. Background

On February 8, 2021, the plaintiffs entered into a contract to purchase more than 5 acres of land at 421 South Cashua Drive in Florence County, South Carolina. The land is within an unincorporated area of Florence County, surrounded by the City of Florence. The plaintiffs developed a plan for 60 units of housing and submitted a preliminary application to the South Carolina State Housing Finance and Development Authority for LIHTC credits to make that housing affordable.

In an April 23, 2021 letter, Derrick Singletary of the Florence County Planning, Building, Inspection, Engineering and Code Enforcement Department stated that the relevant properties “are currently in an unzoned portion of Florence County” and that “multi-family housing units are allowed at this location” (Plaintiff’s Complaint, Exhibit 3). A subsequent April 27, 2021 letter from William Dorriety, Jr., Chairman of the Florence County Council stated that “Florence County supports the potential development of 60 affordable multifamily units located on Cashua Drive” as it would “serve a great need within the County and align with our objective to provide affordable housing in close proximity to essential services, transit corridors and employment centers” (Plaintiff’s Complaint, Exhibit 6). A May 11, 2021 letter from J. Shawn Brashear, Director of the Florence County Planning, Building, Inspection, Engineering and Code Enforcement Department stated that the Jessamine proposal contributes “to a targeted priority investment area and addresses needs specified in the Housing Element Component of the Comprehensive Plan for Florence County,” including encouraging “the development of higher density, affordable housing types near major employment nodes to promote jobs-housing balance” (Plaintiff’s Complaint, Exhibit 7). Brashear added that The Jessamine “would serve a great need by promoting housing for a mix of incomes and backgrounds in the community and from a location standpoint aligns well with our targeted areas for new affordable and mixed-income housing” (Plaintiff’s Complaint, Exhibit 7).

The Plaintiffs continued moving the project forward and the South Carolina State Housing Finance and Development Authority awarded the project \$894,517 in competitive LIHTC credits and further state tax credits (Plaintiff’s Complaint, Exhibit 11). In January of 2022, an article was published online criticizing the development, including a quote from a Florence Resident that, “They are putting a glorified section eight complex in the middle of a

very nice part of Florence” (Plaintiff’s Complaint, Exhibit 12). On January 15, 2022, a resident of the Country Club Forest development emailed other residents urging attendance at a January 18th meeting at the Florence Country Club to discuss “different ways we can all get involved to fight this development” (Plaintiff’s Complaint, Exhibit 13). The email noted that “our neighbors across Cashua in the Country Club are equally concerned, and we have a large group of stakeholders actively engaged in fighting this development” (Plaintiff’s Complaint, Exhibit 13).

The Florence County Council subsequently called a special meeting of the County Council on January 27, 2022 at 8:00 am to introduce by title only Ordinance 17-2021/2022, placing a moratorium on all development related permits for properties bounded by the incorporated limits of a municipality which are currently designated unzoned (Plaintiff’s Complaint, Exhibit 16). The special meeting was adjourned four minutes after it was convened (Plaintiff’s Complaint, Exhibit 16). In an email on February 25, 2022, J. Shawn Brashear, Director of the Florence County Planning, Building, Inspection, Engineering and Code Enforcement Department stated that the property could not be approved as it was subject to a development moratorium, even though the moratorium had not yet been enacted (Plaintiff’s Complaint, Exhibit 18). On March 17, 2022, the Florence County Council voted at the third reading of the ordinance to approve the measure and enact the moratorium. On November 17, 2022, the Florence County Council approved Ordinance 36-2022/2023 to rezone the relevant parcels here from “Unzoned to R-1 Single-family Residential.”

These actions by the County Council made the development of the proposed Jessamine project and its 60 affordable LIHTC units infeasible. According to an analysis of the parcels by ASI Engineers, Inc., under the new R-1 Single-family Residential zoning, approximately 9 single-family units could be built.

d. Findings

Based on my analysis of data and review of documents as described in this report it is my opinion to a reasonable degree of certainty that:

- 1) The Florence County Council's moratorium and related actions had a statistically significant adverse impact on the basis of race in making housing unavailable to Black South Carolinians;
- 2) The Florence County Council's moratorium and related actions perpetuated residential segregation on the basis of race and denied residents the benefits of living in an integrated community.

e. Qualifications

I am an Associate Professor of Law and Urban Planning at the Massachusetts Institute of Technology, where I teach classes on housing policy, land use policy, research design, and statistics, among other topics. I have a Ph.D. in Urban Planning, including graduate coursework in research design, research methods, and statistical analysis. I regularly publish statistical research regarding housing policies in leading peer-reviewed journals in the fields of public policy, housing studies, urban planning, sociology, and economics. I have submitted expert reports and testified on the statistical analysis of data in numerous cases alleging disparate treatment or disparate impact or both under the Fair Housing Act, as identified in my curriculum vitae attached in Appendix A.

My complete curriculum vitae, along with a list of all publications that I have authored in the last ten years, and all matters in the last four years in which I have testified as an expert at trial or deposition, is provided in the Appendix A attached to this Report.

For work related to preparing this report and for all other work other than testimony, my fee is \$300 per hour plus reimbursable expenses. I was assisted by a research assistant paid at a rate of \$100 per hour. No portion of these fees was or is dependent on the nature of my findings or on the outcome of the case.

III. DATA

In the analyses for this report, I use the following sources of data:

- 1) The United States Census Bureau's 2020 Decennial Census Data Profile 1 available at <https://www.census.gov/data.html>
- 2) The United States Census Bureau's 2021 5-Year American Community Survey, Data Profiles 2, 3, and 4 available at <https://www.census.gov/data.html>
- 3) The United States Census Bureau's 2021 5-Year American Community Survey Individual Public Use Microdata Samples for South Carolina PUMA 900 (Florence and Darlington Counties) available at www.ipums.org
- 4) The United States Department of Housing and Urban Development's Low Income Housing Tax Credit (LIHTC) Tenant Level Data, available here: <https://www.huduser.gov/portal/datasets/lihtc/tenant.html>.
- 5) Data obtained via subpoena regarding the racial composition of LIHTC developments in Florence County.

IV. THE EFFECT OF THE MORATORIUM ON HOUSING AVAILABILITY

a. Introduction

To analyze the effect of the Florence County moratorium and related actions on the availability of housing by race, I begin by estimating the expected racial composition of The Jessamine and of housing that could be built on the site as of its new rezoning.

b. Expected Racial and Ethnic Composition of The Jessamine

The proposed Jessamine LIHTC development would have included 60 units rented at levels affordable to households with incomes at 60 percent of the Area Median Income or below. The average household size in Florence County is 3.3 persons (U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates). At this average household size, the Jessamine would have included approximately 198 residents.

Data gathered from 19 of the approximately 22 occupied LIHTC properties in Florence County, South Carolina indicate that at least 78 percent of all the LIHTC units in these 19 properties are occupied by households who identified as Black or African American and 7 percent by white households.¹ For 14 percent of units, data on race were not reported or were unavailable. Focusing just on the units for which data on race were available, 91 percent of all units were occupied by households who identified as Black or African American, 8 percent by households who identified as white, and 1 percent by households who identified as Asian-American or Hispanic. To take the most conservative approach to the data, I use the 78 percent Black and 7 percent white percentages in the analyses below. I conduct additional alternative analyses using data from the United States Department of Housing and Urban Development (HUD) regarding the composition of LIHTC units in the state of South Carolina in Appendix C, and results of those alternative analyses are substantially similar to the results here.

Table 3 summarizes the racial and ethnic composition of the Florence County and South Carolina LIHTC units. The racial and ethnic composition of the residents of the Jessamine would be expected to be similar to the Florence County LIHTC composition.

¹ For the two properties that provided data individually on all residents as opposed to by unit, I allocated the units according to the composition of the resident population.

Table 3: Racial and Ethnic Composition of LIHTC Units in Florence County and in South Carolina

	Florence County (all units)	Florence County (units where data on race are reported)
White	0.07	0.08
Black	0.78	0.91

Using a conservative estimate of the current racial composition of LIHTC units in Florence County, I calculate the expected numbers of residents of The Jessamine by race.

Table 4: Expected Racial and Ethnic Composition of the Residents of The Jessamine

	Based on Florence County LIHTC Data
White	14
Black	154
Other	30
Total	198

As seen in Table 4, using the data on the racial composition of LIHTC units in Florence County, we would expect The Jessamine to have 154 or more Black residents and 14 white residents.

c. Expected Composition of Single-Family Homes

After instituting the moratorium on development, the Florence County Council approved Ordinance 36-2022/2023 to rezone the relevant parcels from “Unzoned to R-1 Single-family Residential.” Under the R-1 zoning, the relevant parcels could be expected to accommodate 9 single-family homes. With a Florence County average household size of 3.3 persons, these 9 units would be expected to include approximately 30 residents.

According to the 2021 5-Year American Community Survey DP4 data, the median home value for all homes in the neighborhood surrounding 421 South Cashua Drive (Census Tract 12) was \$223,600. Newly built homes would likely cost substantially more than this median price, but conservatively using this median home value and estimating a 10 percent downpayment and

a \$201,240 30-year fixed-rate mortgage at a 6 percent interest rate would lead to monthly payments of \$1,207 for principal and interest. A homeowner would also have to pay property taxes and home insurance, and the resident, whether owner or renter, would need to pay for utilities. Conservatively taking into account only the principal and interest payment and estimating the income required to pay for housing costs within 30 percent of gross annual income would require a gross annual household income of at least \$48,280 (more after insurance, taxes, and utilities are added).

Data from the 2021 5-Year American Community Survey Individual Public Use Microdata Samples (PUMS) for the Florence and Darlington County Public Use Microdata Area (PUMA) indicate that the residents of all single-family homes built since 2000 in Florence and Darlington Counties with household incomes greater than \$50,000, 21.3 percent of residents identified as Black and 69.2 percent identified as white , as seen in Table 5.

Table 5: Racial Composition of Residents of Single-family Homes Built in Florence and Darlington Counties Since 2000, With Household Income >\$50,000 (2021 5-Year American Community Survey Individual Public Use Microdata Samples)

	Single-family Since 2000 Income>\$50,000
White Non-Hispanic	0.69
Black Non-Hispanic	0.21
Other	0.09

Using these data regarding the current racial composition of single-family homes by income in Florence and Darlington counties, I calculate the expected numbers of residents of single-family homes built on the site by race.

Table 6: Expected Racial Composition of Residents of Single-family Homes That Could Be Built on the Relevant Parcels

	Single-family Since 2000 Income>\$50,000
White Non-Hispanic	21
Black Non-Hispanic	6
Other	3
Total	30

d. Assessing Any Adverse Impact of the Moratorium
 In *Texas Department of Housing & Community Affairs v. Inclusive Communities Project, Inc.*, 576 U.S. 519, 547 (2015), the Supreme Court recognized the “Fair Housing Act’s continuing role in moving the Nation toward a more integrated society.” Unlawful discrimination under the Fair Housing Act can be established by a preponderance of evidence either of 1) disparate treatment on the basis of a protected characteristic or 2) of discriminatory effect on the basis of a protected characteristic. *Inclusive Communities Project, Inc.*, 576 U.S. at 545.

The Court in *Inclusive Communities* described suits targeting “unlawful practices” such as “zoning laws and other housing restrictions that function unfairly to exclude minorities from certain neighborhoods” as residing “at the heartland of disparate-impact liability.” 576 U.S. at 539. As examples of these “heartland” cases, the Supreme Court in *Inclusive Communities*, 576 U.S. at 539, cited *United States v. Black Jack*, 508 F. 2d 1179, 1184-1185 (8th Cir. 1974) (invalidating ordinance prohibiting construction of multifamily rental units); *Huntington v. Huntington Branch, NAACP*, 488 U. S. 15, 16-18 (1988) (invalidating ordinance prohibiting construction of new multifamily dwellings); and *Greater New Orleans Fair Housing Action Center v. St. Bernard Parish*, 641 F. Supp. 2d 563, 569, 577-578 (ED La. 2009) (invalidating post-Hurricane Katrina ordinance restricting the rental of housing units to only “blood relative[s]” in an area of the city that was 88.3% white and 7.6% black).

Under the Fair Housing Act, there are two ways to establish the discriminatory effect of a challenged policy: (1) “adverse impact on a particular minority group” or other protected class, or (2) “harm to the community generally by the perpetuation of segregation.” *MHANY Mgmt., Inc. v. Cty. of Nassau*, 819 F.3d 581, 619 (2d Cir. 2016) (citing *Huntington Branch, NAACP v. Huntington*, 844 F.2d 926, 937 (2d Cir. 1988)). HUD’s regulation regarding discriminatory effect liability under the Fair Housing Act similarly states: “A practice has a discriminatory effect where it actually or predictably results in a disparate impact on a group of persons or creates, increases, reinforces, or perpetuates segregated housing patterns because of race, color, religion, sex, handicap, familial status, or national origin.” 24 C.F.R. § 100.500.

As discussed below, the data here confirm that Florence County’s moratorium and related actions predictably and actually resulted in an adverse effect on Black home-seekers. Courts have used several methods to calculate whether a difference in the impact of a policy constitutes a disparate impact under the Fair Housing Act. Whichever method one uses, the dramatic racial disparities caused by the County’s policies have an adverse effect on the basis of race.

i. The Betsey v. Turtle Creek Associates Test

In *Betsey v. Turtle Creek Associates*, 736 F.2d 983, 987 (4th Cir. 1984), the Fourth Circuit evaluated a housing policy challenged under the Fair Housing Act by assessing “whether the policy in question had a disproportionate impact on the minorities in the total group to which the policy was applied.” Plaintiffs in *Betsey v. Turtle Creek Associates* introduced evidence showing that “54.3 percent of the non-white tenants in the building received termination notices as opposed to only 14.1 percent of the white tenants.” *Id.* at 988. The court held that “[u]nder these circumstances, we believe a disparate impact is self-evident.” *Id.*

The approach put forward in *Betsey v. Turtle Creek Associates* for evaluating the disparate impact of a policy compares the proportion of protected-class members adversely

affected by the challenged policy to the proportion of persons not belonging to a protected class who are adversely affected. *See also Mount Holly Gardens Citizens in Action, Inc. v. Twp. of Mount Holly*, 658 F.3d 375, 382 (3d Cir. 2011) (finding disparate impact based on data showing that 23 percent of African American households and 32 percent of Latino households in the Township would be affected by the challenged housing demolition, compared to only 3 percent of white households).

The Fourth Circuit in *Smith v. Clarkton*, 682 F.2d 1055, 1058-1059 (4th Cir. 1982) applied the same approach in a case in which plaintiffs alleged “that the town officials, bowing to pressure from public sentiment in Clarkton, . . . effectively block[ed] the construction of the fifty units of housing.” The district court again compared the proportion of Black county residents adversely affected by the challenged policy to the proportion of white county residents adversely affected and, instead of presenting the percentage of affected residents by race, found that the town’s blockage of the construction of low-income housing “fell 2.65 times more harshly on the black population than on the white.” *Id.* at 1064. The Fourth Circuit noted that the “statistical picture leaves no doubt that the black population of Bladen County was adversely affected by the termination of the housing project, as it is that population most in need of new construction to replace substandard housing, and it is the one with the highest percentage of presumptively eligible applicants.” *Id.* at 1065.

In *de Reyes v. Waples Mobile Home Park L.P.*, 903 F.3d 415, 428 (4th Cir. 2018), the Fourth Circuit again approved of an approach parallel to that in *Betsey v. Turtle Creek Associates* and *Smith v. Clarkton*. In *de Reyes*, the Fourth Circuit also reviewed the recent Second Circuit decision in *Mhany Mgmt. v. Cnty. of Nassau*, 819 F.3d 581, 617 (2d Cir. 2016), in which plaintiffs established disparate impact through analyses finding that Garden City’s rejection of

multifamily zoning in favor of more restrictive zoning had a significant disparate impact on minorities because it “largely eliminated the potential for the type of housing that minorities were disproportionately likely to need — namely, affordable rental units.” *Mhany Mgmt.*, 819 F.3d at 617. The court noted that the original multifamily zoning “proposal would have created a pool of potential renters with a significantly larger percentage of minority households than the pool of potential renters for the zoning proposal ultimately adopted.” *Mhany Mgmt. v. Cnty. of Nassau*, 819 F.3d at 607.

Here, using the expected racial composition of The Jessamine based on the composition of LIHTC units in Florence County and the expected composition of the single-family homes that could now be built based on the composition of households in single-family homes in Florence and Darlington counties with incomes of at least \$50,000 or greater, the County’s actions blocking the LIHTC project and rezoning the parcels for single-family homes would adversely affect 154 of the 160 potential Black residents (96%) compared to 14 of the 35 potential White residents (40%), as seen in Table 7. This adverse impact on 96 percent of Black potential residents compared to 40 percent of potential white residents leads to a difference of 56 percentage points in the experience of an adverse impact (substantially larger than the 30 percentage point difference in impact in *Betsey v. Turtle Creek Associates*).

Table 7: Adverse Effect of the Moratorium by Race, Using Florence County LIHTC Composition and Taking Income into Account

	Adverse Effect	No Adverse Effect	Total	Adverse Effect
Black	154	6	160	0.96
White	14	21	35	0.40

The adverse effects of denial of access to housing on these parcels fall 2.4 times more harshly on Black potential residents compared to white ones. Not only does the adverse impact

fall disproportionately on Black potential residents relative to White ones, the outcome of the moratorium is to exclude 96 percent of the potential Black residents of the parcels.

ii. The Four-Fifths Test

In a challenge to residency preferences for Section 8 vouchers proposed by several Massachusetts housing authorities, the First Circuit approved of the use of a four-fifths test borrowed from the Equal Employment Opportunity Commission (“EEOC”) to determine if a difference in selection rates constitutes a disparate impact. *Langlois v. Abington Hous. Auth.*, 207 F.3d 43, 50 (1st Cir. 2000); *Langlois v. Abington Hous. Auth.*, 234 F. Supp. 2d at 57-59. In enforcing Title VII of the Civil Rights Act of 1964, the EEOC has adopted a four-fifths “rule of thumb” under which a selection rate for any protected group which is less than four-fifths, or eighty percent, of the selection rate for the group with the highest selection rate is considered a disparate impact. This four-fifths rule is “a practical means of keeping the attention of the enforcement agencies on serious discrepancies in rates of hiring, promotion and other selection decisions.”² The rule consists of a four step process to assess the adverse impact of a policy:

- (1) calculate the rate of selection for each group (divide the number of persons selected from a group by the number of applicants from that group);
- (2) observe which group has the highest selection rate;
- (3) calculate the impact ratios, by comparing the selection rate for each group with that of the highest group (divide the selection rate for a group by the selection rate for the highest group);
- (4) observe whether the selection rate for any group is substantially less (i.e., usually less than 4/5ths or 80%) than the selection rate for the highest group. If it is, adverse impact is indicated in most circumstances.³

The analogous comparison here would be comparing the selection of Black potential residents from both plans who would be estimated to live as residents under the

² Common Interpretation Guidance, U.S. Equal Employment Opportunity Commission, 1979, *available at* https://www.eeoc.gov/policy/docs/qanda_clarify_procedures.html.

³ *Id.*

zoning to the selection of white potential residents from both plans who would be estimated live as residents under the single-family zoning.

Using the Florence County data, of 35 potential white residents between the LIHTC project and the single-family homes, 21 would be estimated to be selected for the single-family homes, a selection rate of 0.59, as seen in Table 8. For Black applicants, 6 out of 160 would be estimated to be selected for the single-family homes, a selection rate of 0.04, as also seen in Table 8. The impact ratio divides the selection rate for Black applicants (0.04) by that for white applicants (0.59) and finds that a Black applicant's rate of selection is roughly 7 percent that of white applicants, a difference in the selection rates far surpassing the 80 percent threshold required by the four-fifth's test. The wide difference in the selection rate by race undoubtedly constitutes an adverse effect under the four-fifths test.

Table 8: Four Fifths Test Using Florence County LIHTC Data and Single-family Homes Built Since 2000 with Household Income >\$50,000

	Not Selected	Selected	Total	Selection Rate
Black	154	6	160	0.04
White	14	21	35	0.59
Total	168	27	195	

To apply this EEOC approach of comparing the selection rate of one group of applicants to the selection rate of that group with the highest rate, the district court in *Langlois* adapted the four-fifth's test and "compared the percentage of minority applicants selected with the residency preference scheme to the percentage of minorities selected without the preference in place." 234 F. Supp. 2d at 57; *see also Langlois v. Abington Hous. Auth.*, No. C.A. 98-12336-NG, 1998 WL 1029207, at *6 (D. Mass. Dec. 30, 1998).

Under this modification of the four-fifths test, one would compare the percentage of Black potential residents who would be expected to receive housing under the new zoning (4 percent) to the percentage that would have been selected under the original as of right multifamily Jessamine project as proposed (96 percent). Four-fifths of 96 percent would be 77 percent. The actual share of all potential Black residents who could be expected to live in the single-family homes that now could be built there is 4 percent, much less than the four-fifths threshold of 77 percent and again evidence of an adverse impact.

iii. The Chi-Square Test

An alternative test some courts have suggested is a statistical test measuring the likelihood that the extent of the difference between the composition of a group able to access housing and a group denied access to housing could have occurred by chance. *Langlois*, 234 F. Supp. 2d at 58. A widely used statistical test to assess whether two variables are independent of each other is the Pearson chi-square test. It can test in this case whether the difference in the racial composition of the expected residents of housing developments on the parcels before and after the adoption of Florence County's moratorium could occur by chance. Mathematically, the chi-square test calculates the sum of the squared differences between the observed and expected values divided by the expected values. That calculation generates a chi-square statistic that can be compared to a chi-square table to calculate the likelihood that the difference between the observed and expected values could have happened by chance, also known as a p-value. A p-value is a widely accepted measure of statistical significance. In Table 9, below, I present the contingency tables representing the estimated values, as well as the chi-square value and the p-value, based on data regarding Florence County LIHTC residents and residents of single-family

homes built in Florence and Darlington Counties since 2000 with household incomes of \$50,000 or greater.

Table 9: Chi-Square Test of Independence by Race Using Florence County LIHTC Data and single-family homes Built Since 2000 with Household Income >\$50,000

	Adverse Effect	No Adverse Effect	Total	Adverse Effect
Black	154	6	160	0.960
Other	44	23	67	0.654
Total	198	30	228	0.870
x2 stat.	39.41831034	Degrees of Freedom = 1		
pvalue	0.0000000003			

The chi-square tests indicate that the difference between the expected racial composition of the proposed LIHTC units that the County blocked and the single-family homes that the County permits under the revised zoning are extremely unlikely to occur by chance. In other words, the results of the chi-square test here demonstrate with greater than 99.99999% certainty that the difference between the expected number of Black residents in The Jessamine and the expected number of Black residents in any single-family homes built on the site is not by chance.

No matter which test one uses, the data consistently demonstrate that Florence County's moratorium and related policies have had a significant adverse impact on Black home-seekers in Florence County.

V. THE EFFECT OF THE MORATORIUM ON PERPETUATION OF SEGREGATION

a. The Critical Need for Affordable Housing *i. The Drivers of the Affordable Housing Need*

Housing stability is fundamental to social and economic well-being, but achieving stable housing is a pressing challenge facing a growing share of low-income renters in the United

States (Bratt 2002; National Academies of Sciences, Engineering, and Medicine 2018). Since the 1970s, median gross rents nationally have increased faster than median household incomes, leaving renters paying a larger and larger share of their income towards housing costs (Joint Center for Housing Studies, 2019). New rental construction in recent years has overwhelmingly targeted high-income renters, leaving a diminishing supply of low-cost rental units (Joint Center for Housing Studies, 2020).⁴

ii. The Effects of Housing Instability

The shortage of affordable housing leads to high rates of housing instability for low-income households. Housing instability can be created through high housing costs relative to income, poor housing quality, overcrowded housing, neighborhood instability, eviction, foreclosure, and homelessness, among other catalysts. This housing instability is associated with negative outcomes on adults' and children's physical and mental health (Burgard et al. 2012; Currie and Tekin, 2015; Desmond and Kimbro, 2015; Sandel et al. 2018), as well as job loss and other material hardship (Desmond and Gershenson, 2016).

Housing instability broadly is associated with negative economic and health consequences for families. Moves made in reaction to housing instability force households into a rushed search for new housing that often leaves low-income families in worse residential conditions (DeLuca, Wood, & Rosenblatt, 2019; DeLuca and Jang-Trettien, 2020), which in turn shape other health and economic outcomes (e.g., Shaw, 2004). These effects persist for years,

⁴ Two out of every five renter households in 2019 paid more than 35 percent of their gross income for rent, leaving little residual income for other household necessities (U.S. Census, 2019). Nearly one out of every five renter households (roughly 8 million households) paid more than half of their income to rent (Department of Housing and Urban Development, 2020). For every 100 households with incomes at or below the area median income, there were only an average of 59 units affordable to them (Department of Housing and Urban Development, 2020).

suggesting that housing instability creates a durable difference in the likelihood of homelessness over the long-term.

iii. The Low Income Housing Tax Credit Program

Congress created the LIHTC program in 1986 to leverage federal tax credits for private investment in the construction of housing targeted at renters with incomes below 60 percent of the median income in their metropolitan area. The U.S. Treasury distributes LIHTC credits to every state and territory roughly in proportion to its population. State, territorial, or municipal housing finance agencies then award the tax credits to affordable housing developers through a competitive application process. The LIHTC program allows private real estate developers to receive federal income tax credits for constructing or renovating rental properties for households with average incomes below 60 percent of the area median and operating the housing development under the Internal Revenue Service's LIHTC guidelines for a certain compliance period, originally 15 years and now 30 years (Freedman & McGavock, 2015; Lens & Reina, 2016). These real estate developers partner with investors who provide equity for the housing development and, in exchange, receive the tax credit annually over 10 years. The partnership with equity investors through the tax credit program reduces the debt and debt service costs, allowing the buildings to operate with rents targeted at households averaging between 50 and 60 percent of the Area Median Income.

Federal law requires the LIHTC allocation plans created by housing finance agencies to give preference to projects that serve the lowest income tenants, for the longest period of time.⁵ Allocation plans must include selection criteria regarding project location, local housing needs, and capacity to house individuals with disabilities or special needs, among others.⁶

⁵ 26 U.S.C. § 42(m)(1)(B)(ii).

⁶ 26 U.S.C. § 42(m)(1)(C).

The LIHTC program is the largest federal program subsidizing the construction of rental units targeted to households with low-incomes and it financed the construction or renovation of more than 3 million housing units in its first three decades of existence. There are more than 30,000 active LIHTC units in the State of South Carolina.⁷ The median household income of LIHTC residents in South Carolina in 2021 was roughly \$17,159.⁸

b. Neighborhood Effects

A home is much more than just an asset or even a place to sleep. A home and its location are the foundation for access to crucial social, institutional, and public resources in the United States (Sampson 2012; Freemark et al. 2020). The level and quality of these neighborhood-based resources are powerful predictors of individual life chances (Sharkey 2013; De la Roca et al. 2018; Galster 2019; Chyn and Katz 2021). Research on neighborhood effects is extensive and robust. Consistent findings demonstrate that the location of one's home and the characteristics of its neighborhood have substantial impacts on one's health, well-being, and socioeconomic mobility (Ellen 2000; Ludwig et al. 2013; Chetty et al. 2014; Chetty et al. 2016).

Differentiation by residential location in the United States is part of a spatial structure that shapes our social lives (Sampson 2012; Galster and Sharkey 2017). Neighborhoods in the United States are frequently separated by race, ethnicity, and income (Sampson 2012; De la Roca et al. 2014). They are also unequal (De la Roca et al. 2014; Galster and Sharkey 2017). The degree of racial and economic segregation to which people are exposed has been found to dramatically influence upward economic advancement (Massey and Denton 1993; Cutler and

⁷ <https://www.huduser.gov/portal/datasets/lihtc/tenant.html>

⁸ Data obtained from <https://www.huduser.gov/portal/datasets/lihtc/tenant.html>. Income adjusted from July 2019 to July 2021 using Bureau of Labor Statistics Consumer Price Index (CPI) Inflation Calculator <https://data.bls.gov/cgi-bin/cpicalc.pl>

Glaeser 1997). Existing research has consistently found that higher levels of Black-white and Latinx-white segregation lead to worse health, educational, and socioeconomic outcomes for Black and Latinx Americans (Cutler and Glaeser 1997; Ellen 2000; Card and Rothstein 2007; Steil et al. 2015; Ellen et al. 2016; De la Roca et al. 2018).

Neighborhoods shape families across generations, and the inequality of those neighborhoods must be conceptualized as a central dimension of social stratification and racial inequality in the United States (Sharkey 2013). In short, place matters (Dreier et al. 2014). Research on how place matters—on how dimensions of individuals’ residential contexts influence individuals’ lives—is often described as the study of place or neighborhood effects.

i. The Study of Neighborhood Effects

Neighborhoods shape access to institutions, peers, and social networks, as well as exposure to environmental benefits and hazards, with effects on educational attainment, labor market outcomes, and physical and mental health, among other dimensions (Ellen and Turner 1997; Durlauf, 2004; Bayer et al., 2008; Sharkey and Faber 2014). Neighborhoods have an impact on individual and household socio-economic outcomes in at least two ways (Graham 2018). First, neighborhoods matter because of the level of resources to which they provide access or the level of harms to which they expose residents. Whether measured through proximity to high-performing schools or well-paying jobs, or exposure to air pollution or crime, neighborhood institutions and resources shape the abilities we are able to develop and our capacity to make the most of those abilities.

Second, neighborhoods matter because the experiences and actions of our neighbors directly influence our own through what are often called peer effects or social interaction effects. To the extent that learning depends, in part, on the engagement and learning of one’s classmates,

then children in a classroom with more engaged peers will learn more quickly and deeply than an identical student in a classroom with less engaged peers. Looking temporally, outcomes for individuals are also generally understood to be a product of what are sometimes called developmental neighborhood effects or exposure effects that are the result of the cumulative length of exposure to different neighborhood attributes, as well as what are sometimes called contemporaneous neighborhood effects that shape the resources, peer groups, or social networks an individual is able to access at the current moment (Chyn and Katz 2021). The literature on neighborhood effects is voluminous and I review some of the most relevant recent research below, focusing analyses of the causal effects of neighborhoods through experimental, quasi-experimental, or other causal identification methods to better understand the extent to which neighborhoods affect outcomes and how.

ii. The Moving to Opportunity Housing Mobility Demonstration

In an effort to better comprehend the effects of neighborhoods on individuals and households, in 1994 HUD began the Moving to Opportunity housing mobility demonstration described earlier in this report. HUD used an experimental design randomly assigning roughly 4,600 households in public housing in Baltimore, Boston, Chicago, Los Angeles, and New York into three groups: 1) the experimental group, offered mobility counseling and a restricted housing voucher that could only be used in a neighborhood with a 1990 poverty rate below 10 percent; 2) the Section 8 group, offered a voucher with no restraints on where it could be used; and 3) the control group, offered no assistance through the program (Briggs, Popkin Goering 2010). The participants in the experimental group that moved to low-poverty neighborhoods experienced statistically significant improvements in physical and mental health compared to the control group. The households who moved to neighborhoods with low-poverty rates experienced lower rates of obesity and diabetes (Ludwig et al. 2011), lower levels of

psychological stress (Kling et al. 2007), and higher levels of subjective well-being (Ludwig et al. 2012) consistently over the decade following the move (Ludwig et al. 2013), relative to the control group. Children in the Moving to Opportunity program who moved with their families to the low-poverty neighborhoods before the age of 13 experienced a significant increase in the likelihood of attending college and a 31 percent increase in income relative to the control group (Chetty et al. 2016).

iii. Other Approaches to Studying Neighborhood Effects

Other recent research has used rigorous social scientific methods to test the effects of neighborhoods in a variety of contexts. For instance, several recent studies used the sudden relocation of New Orleans residents after Hurricane Katrina and compared outcomes of displaced New Orleans residents with a comparison group living in similar U.S. cities, finding long-term improvements in labor market outcomes and reductions in mortality for the movers (Deryugina et al. 2018; Deryugina and Molitor 2020). These improvements in health and labor market outcomes were associated with the fact that people displaced by Hurricane Katrina typically moved to areas with stronger labor markets and better health outcomes (Deryugina et al. 2018; Deryugina and Molitor 2020). The levels of mortality in the neighborhoods where households relocated by Katrina moved were found to have an almost one-for-one relationship with the longevity of the movers; movers' mortality increased with the local rates of obesity or smoking in their new neighborhoods and decreased as average income and home values in their new neighborhoods increased (Deryugina and Molitor 2020).

Using deidentified tax records covering the whole U.S. population, studies have consistently found significant effects of the place of residence on socioeconomic mobility in multiple studies (Chetty et al. 2014; Chetty et al. 2016; Chetty and Hendren 2018a; Chetty and Hendren 2018b). Chetty et al. (2014) find that the probability that a child whose parents are in

the bottom quintile of the income distribution will themselves end up in the top quintile of income earners is powerfully shaped by the place where they grow up, and specifically that the effect of place has an impact 60 percent as large as the effect of parental income. Exploring why place matters for economic mobility, Chetty et al (2014) find that higher levels of racial and income segregation are correlated with reduced levels of intergenerational upward mobility. They also find areas with higher mean test scores in math and English from grade 3-8 (after controlling for income levels) and lower high-school dropout rates are very highly correlated with economic mobility.

In subsequent research, Chetty and Hendren (2018a) use the deidentified tax records of more than 7 million households that moved to examine whether children who move to neighborhoods with higher rates of upward mobility among children who had grown up there have better outcomes themselves. The study specifically compared the outcomes of children who moved at different ages to identify the rate at which their outcomes converge with the outcomes of children who were already living there. Their findings suggest that the majority of the variation in outcomes across areas is due to causal effects of neighborhoods (Chetty and Hendren 2018a: 1110). In a companion paper focused on households who move, Chetty and Hendren (2018b) find that, as in their 2014 work on place effects generally, moves to neighborhoods with less concentrated poverty, less income inequality, higher-performing schools, a larger share of two-parent families, and lower crime rates are associated with higher incomes and levels of intergenerational economic mobility.

Another approach scholars have used to identify causal effects of place has been a focus on the effects of mobility caused by public housing demolition or random assignment processes in public housing. Chyn (2018) compared the outcomes of displaced children whose families

received Housing Choice Vouchers to their peers who lived in nearby public housing that was not demolished, finding that the children who moved with Housing Choice Vouchers ended up in neighborhoods with lower poverty and crime rates and were 9 percent more likely to be employed and had 16 percent higher earnings than those who remained. Galster et al. (2016) use the random assignment of households from the waiting list to public housing in different neighborhoods to evaluate the effects of neighborhoods, finding that neighborhood racial and ethnic composition and neighborhood measures of social vulnerability, specifically the poverty rate, unemployment rate, share of renter households, and share of female household heads, predict students' academic performance.

c. Comparing Neighborhoods

As discussed above, recent research on neighborhood effects has employed several different research designs to evaluate the extent to which the neighborhood where a person lives affects their residents and the processes through which those effects occur. As an initial starting point, we know that higher levels of segregation by race and income are associated with significant negative effects on educational and labor market outcomes (Cutler and Glaeser 1997; De la Roca et al 2018). The inequality between places that racial and economic segregation creates affects outcomes in at least two ways: through peer effects, which are often measured through neighborhood indicators of human capital; and through exposure to unequal levels of place-based resources, opportunities, or hazards.

The literature describes the differences in neighborhoods that are relevant to these effects in three parts: 1) differences in socio-economic composition representative of broader patterns segregation and inequality; 2) differences in educational attainment and other dimensions of human capital that shape peer effects; and 3) differences in exposure to place-based resources or hazards.

i. Differences in socioeconomic composition

To understand these differences in socioeconomic composition across neighborhoods and levels of segregation by race and income, it is helpful to analyze differences in the racial composition of the neighborhoods at issue, neighborhood level median household incomes, and neighborhood homeownership rates. The presence of affluent neighbors has been identified as a salient predictor of childhood development (Brooks-Gunn et al. 1993; Klevanov et al. 1994). The rate of homeownership is an important indicator of neighborhood socioeconomic stability (Rohe and Stewart 1996; Galster et al. 2016).

Existing research has consistently found that higher levels of Black-white and Latinx-white segregation led to worse health, educational, and socioeconomic outcomes for Black and Latinx Americans in relation to white neighbors (Cutler and Glaeser 1997; Ellen 2000; Card and Rothstein 2007; Steil et al. 2016; Ellen et al. 2016; De la Roca et al. 2018). The resources and opportunities that racially or ethnically homogenous neighborhoods provide are likely to vary, however, depending on the socio-economic attributes of the group. In general, groups with greater economic or other resources may benefit from segregation while those with fewer resources may be harmed.

ii. Differences in human capital

Residential segregation can lead to large disparities in levels of neighborhood human capital, such as educational attainment and professional skills and networks. William Julius Wilson (1997) argued that the educational and lifetime experiences of adult residents in a neighborhood can powerfully affect the outcomes of neighbors and youth by shaping access to conventional role models and the mainstream social networks that facilitate social and economic advancement. Recent research on Black-white segregation supports Wilson's theory about neighborhood human capital and social isolation, finding that increases in the proportion of

college-educated African American adults in a metropolitan area significantly reduce the negative effects of segregation on Black youths' educational attainment (Bayer, Fang, and McMillan 2014).

Social networks within neighborhoods are important for labor market outcomes, making local employment rates a salient factor in assessing place effects. Recent work by Bayer et al. (2008) finds that residing on the same versus nearby blocks increases the probability of individuals working together by over 33 percent, largely because of referrals from one neighbor to another for jobs. These effects are particularly significant for pairs of individuals with similar characteristics, such as having children of a similar age or adults having similar educational attainment.

Research by Galster et al. (2016) highlights the significance of poverty rates as measures of neighborhood human capital that shape outcomes, while scholarship by Chetty et al. (2014) and Chetty and Hendren (2018b) have noted additionally the salience of the share of female headed households.

iii. Differences in place-based resources and hazards

The quality of life in a neighborhood is profoundly shaped by the availability and the quality of public services that are delivered, from schooling to public safety to sanitation and public health. Residential segregation affects individual outcomes by contributing to unequal access to crucial municipal services and institutions, including public education. Areas with public schools with higher math and English test scores have been consistently associated with higher incomes and higher levels of socio-economic mobility (Chetty et al. 2014; Chetty and Hendren 2018b). Sharkey et al. (2014) find that exposure to neighborhood violence affects children's academic performance, and Harding (2009) estimates that neighborhood violent crime

rates account for half of the association between neighborhood disadvantage and high school graduation.

d. The Effects on Segregation and Lost Opportunities for Future LIHTC Residents of Florence County's Actions Blocking the Jessamine

I use the framework developed above to compare the neighborhoods at issue in this case and to identify the opportunities lost when the proposed units at 421 South Cashua Drive were made unavailable for affordable multi-family housing. As seen above in Table 2, the site at 421 South Cashua Drive presents tremendous opportunity for affordable housing developments to support residents through a neighborhood environment rich with access to place-based opportunities. To evaluate the extent to which the 421 South Cashua Drive neighborhood may provide access to more place-based opportunities or exposure to more place-based amenities, I compared several measures of neighborhood conditions or characteristics on average for the 421 South Cashua Drive neighborhood and the surrounding geographies.

The indicators selected represent varying dimensions of neighborhood disadvantage discussed above, including measures of background neighborhood characteristics reflecting levels of racial and income segregation, affluence, and stability (racial composition, median household income, and home ownership rate) and measures of neighborhood human capital that shape peer effects (educational attainment, unemployment rate, share of families with a single female head).⁹

⁹ The data for analysis was gathered from the American Community Survey, a representative survey of more than 3.5 million housing unit addresses conducted by the United States Census Bureau annually. I specifically use the most recent American Community Survey 5-year estimate for 2017-2021, centered on 2019. I use data for each geography obtained from the tract level Data Profiles 2, 3, 4, and 5.

i. Perpetuation of Segregation

Racial segregation is frequently measured through the dissimilarity index, which measures the evenness of the geographic distribution of two populations across a geography.¹⁰ The dissimilarity index measures the share of one group's population that would have to change residence for each neighborhood (or other small geography, in this case, each Census Tract) to have the same share of that group as the metropolitan area (or other large geography). The possible values of the dissimilarity index range from 0.0, which would represent complete evenness of distribution or integration, to 1.0, which would represent complete separation or segregation.

Using the 2020 Decennial Census data, the Black-white dissimilarity index value for Florence County is 0.46.¹¹ This dissimilarity index value means that more than 4 of every 10 Black residents of the MSA would have to change neighborhood of residence in order for there to be a balanced geographic distribution of residents on the basis of race. Areas with a dissimilarity index of 0.31 to 0.60 have been categorized as “moderate segregation metropolitan areas.”¹²

Siting a LIHTC development in which 78 percent or more of the residents would be expected to be Black in a census tract in which 80 percent of the residents are white would further residential integration by race. The actions of the Florence County Council in blocking the LIHTC development and rezoning the land for single-family housing, the racial composition of which will likely mirror the neighborhood's existing residents, perpetuates residential

¹⁰ The dissimilarity index (D) is calculated using the equation: $D = \frac{1}{2} \sum_i^n \left| \frac{w}{W} - \frac{b}{B} \right|$

Where n= the number of spatial units (Census Tracts), w = the number of white residents in tract i, W = the total number of white residents in the larger geographical area (city, county, or metropolitan area), b = the total number of Black residents in tract i, and B = the total number of Black residents in the larger geographical area.

¹¹ See <https://s4.ad.brown.edu/projects/diversity/segregation2020/city.aspx?cityid=4525810>.

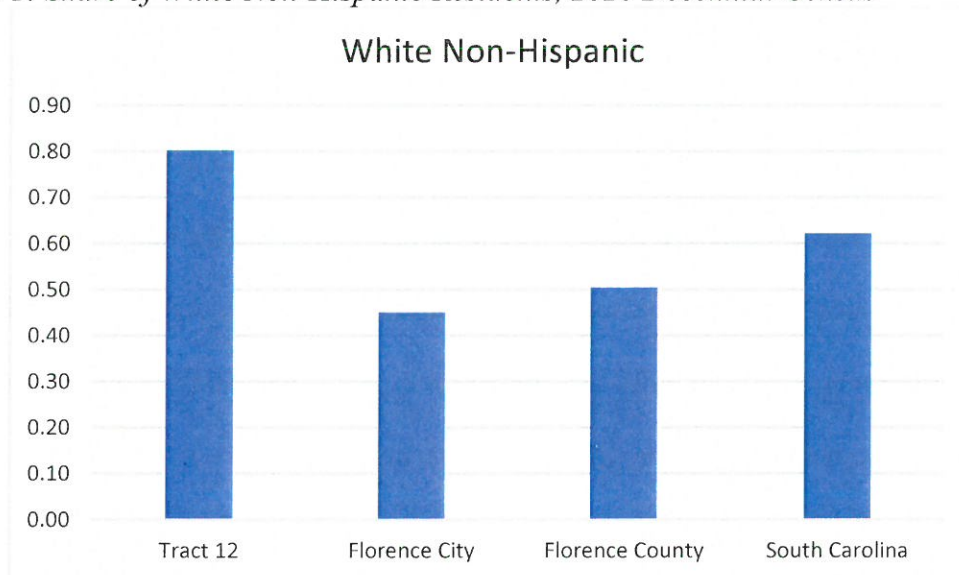
¹² Massey, Douglas S., and Jonathan Tannen. “A research note on trends in black hypersegregation.” *Demography* 52, no. 3 (2015): 1025-1034. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4886656/>

segregation on the basis of race. It also denies LIHTC residents access to neighborhoods with desirable public amenities and is likely to reduce socio-economic mobility for LIHTC residents.

1. Differences in Neighborhood Socioeconomic Composition

Higher levels of segregation by race and income are associated with wide disparities in neighborhood characteristics and significant negative effects on educational and labor market outcomes for Black and Latinx individuals (Cutler and Glaeser 1997; De la Roca et al 2018). As seen in Figure 1, the construction of affordable housing in which 78 percent or more of residents would be expected to be Black on the parcels on South Cashua Drive, a neighborhood where 80 percent of residents are White, would have furthered residential integration by race.

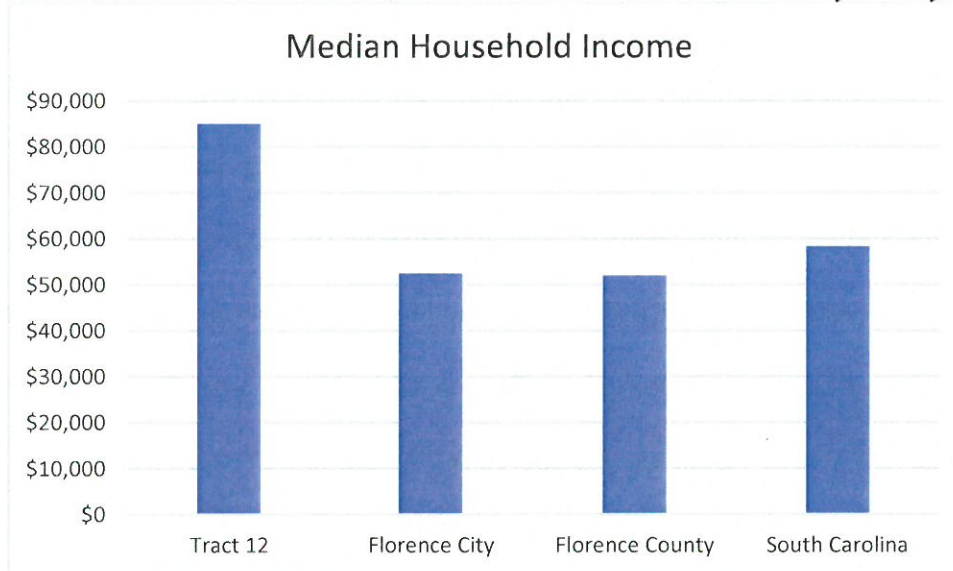
Figure 1: Share of White Non-Hispanic Residents, 2020 Decennial Census



The presence of affluent neighbors is associated with better educational outcomes for children, among other effects. As seen in Table 2, the average median household income on Census Tract 12 where the proposed development would have been (\$85,000) is strikingly different than the medians in Florence City, Florence County, or South Carolina. The median

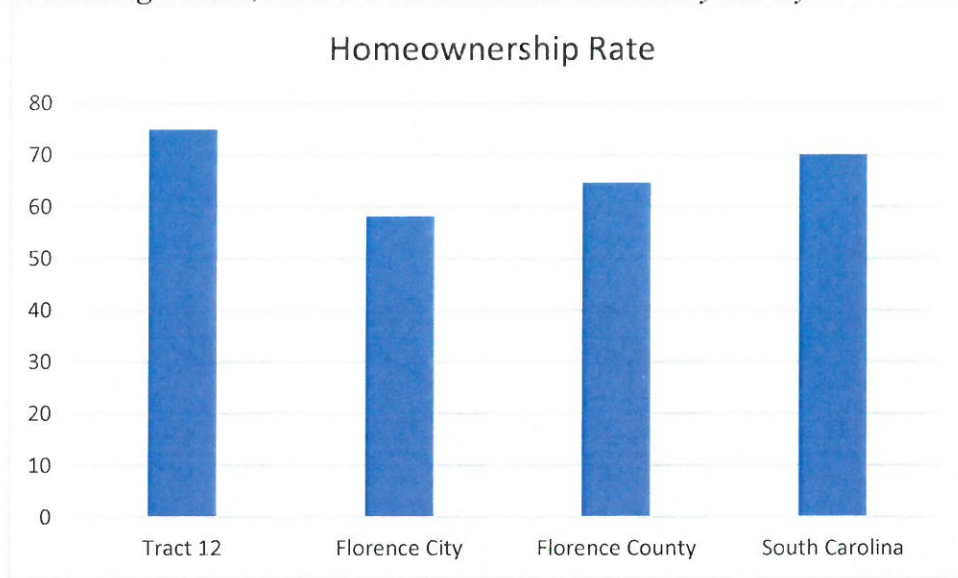
household income in Tract 12 is 62 percent or more higher than the median incomes in the City of Florence or Florence County.

Figure 2: Median Household Income, 2021 5-Year American Community Survey



The share of owner-occupied housing is also correlated with a variety of positive neighborhood characteristics, including political participation and broader measures of neighborhood stability and collective efficacy. The differences between the neighborhood where The Jessamine was proposed and the surrounding geographies are again notable. In the site proposed for The Jessamine, 75% of units were owner-occupied, substantially higher than the rate of owner-occupancy in Florence City (58%) or Florence County (65%).

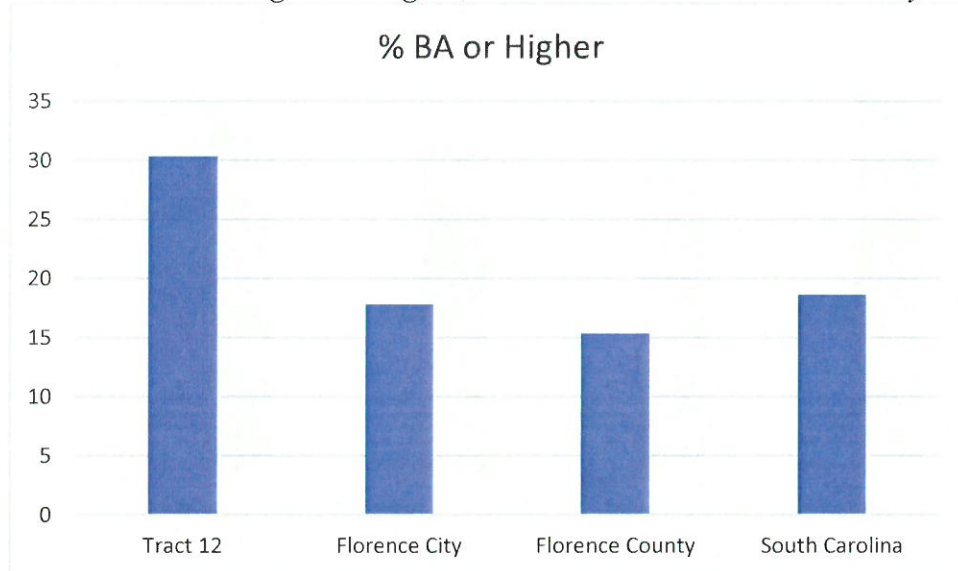
Figure 3: Housing Tenure, 2021 5-Year American Community Survey



2. Differences in Neighborhood Human Capital

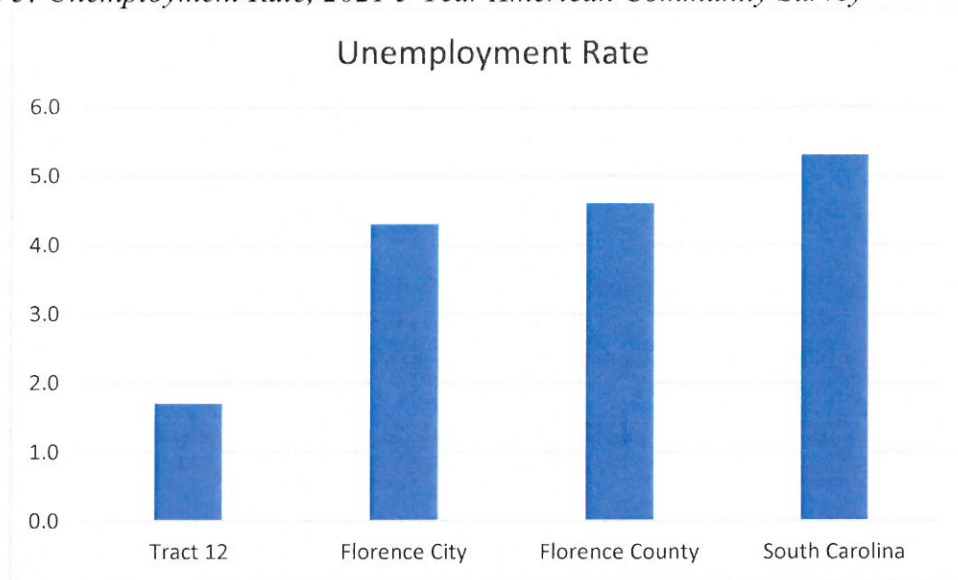
As discussed above, differences in neighborhood human capital drive peer effects or social interaction effects that have profound overall effects on individual outcomes, educational attainment, unemployment, and familial status. Educational attainment is one of the foundational measures of human capital and is often captured by the share of neighborhood residents 25 years and older with a bachelor's degree or higher education. Table 1 indicates that nearly twice as many residents 25 and older in the neighborhood where The Jessamine was proposed (30%) have a bachelor's degree or higher compared to the Florence City (18%) or Florence County (15%).

Figure 4: Educational Attainment Measured Through Share of Individuals 25 Years of Age and Older with a Bachelor's Degree or Higher, 2021 5-Year American Community Survey



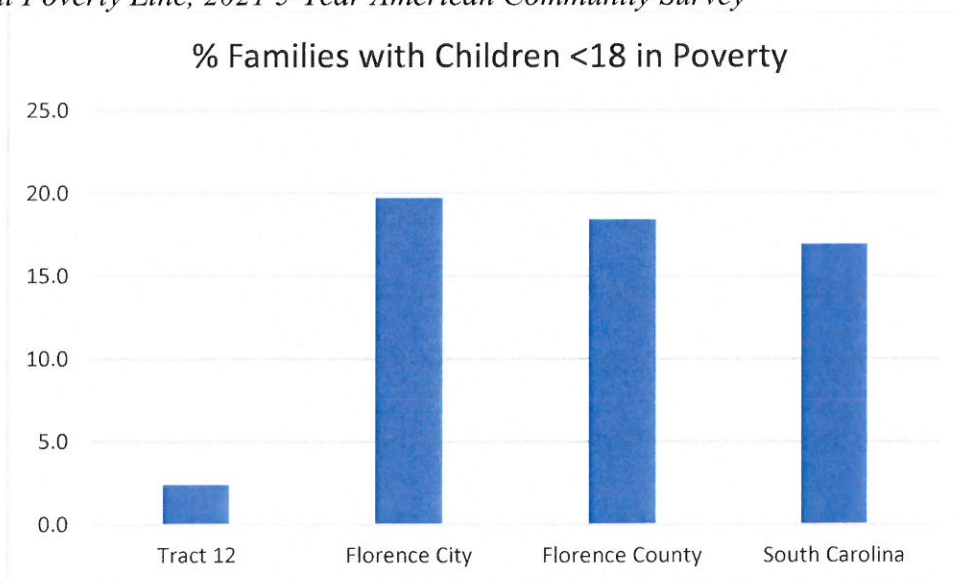
Additionally, unemployment is a neighborhood human capital driver that impacts social interaction. Unemployment captures the share of the population 16 years of age and over in the civilian labor force that is unemployed, shaping both perceptions of opportunity among neighbors and access to employment through social networks. Unemployment was at low levels generally during the most recent American Community Survey reported here, and the unemployment rate in the neighborhood where The Jessamine was proposed (1.7%) was less than half the unemployment rate in Florence City (4.3%) or Florence County (4.6%).

Figure 5: Unemployment Rate, 2021 5-Year American Community Survey



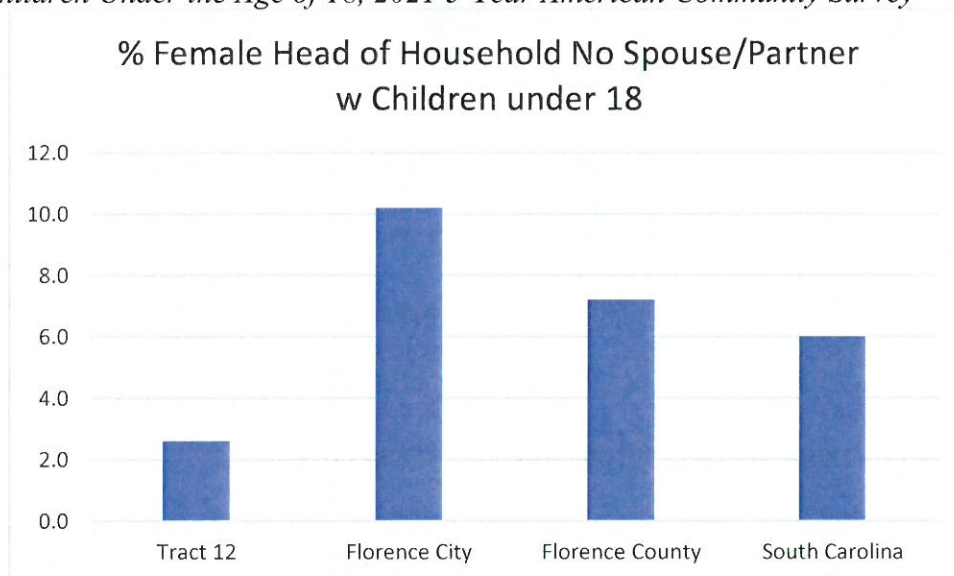
Neighborhood poverty rates or the share of households with low incomes have been identified as salient predictors of childhood development and socio-economic mobility. The share of families with children under the age of 18 who had incomes at the federal poverty line or below was dramatically lower in the neighborhood where The Jessamine was proposed (2.4%) compared to either Florence City (19.7%) or Florence County (18.4%).

Figure 6: Share of Families with Children Under the Age of 18 with Incomes at or Below the Federal Poverty Line, 2021 5-Year American Community Survey



Finally, familial status can be impacted by neighborhood, including whether a family is a single-parent household. One of the consistent findings in recent research by Raj Chetty and his colleagues has been the significant effect that the share of single parent households has on socioeconomic mobility for all residents. The share of households with children under 18 that are single parent, female headed households in the neighborhood proposed for the Jessamine (2.6%) was dramatically lower than in Florence City (10.2%) or Florence County (7.2%).

Figure 7: Share of Households with a Female Household Head and No Spouse or Partner and with Children Under the Age of 18, 2021 5-Year American Community Survey



3. Summary

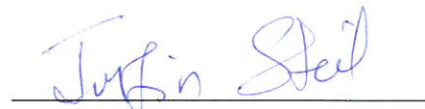
Across all of the measures, and typically by substantial margins, the neighborhood where The Jessamine was proposed is substantially more advantaged than the average across Florence City or Florence County. Looking at these multiple salient dimensions of neighborhoods reveals that the neighborhood in which The Jessamine was proposed has neighborhood characteristics associated with better household outcomes relative to other neighborhoods in Florence City or Florence County.

The scholarship on place effects provides a strong basis for inferring that these differences in neighborhood characteristics between the neighborhood where The Jessamine was proposed and the surrounding averages would have been consequential for life chances and opportunity. A low- or moderate-income household living in the neighborhood where The Jessamine was proposed would likely find their opportunities less circumscribed and have more access to some of the positive place effects than the residents of other LIHTC properties.

VI. CONCLUSION

Based on the analyses above, I have formed the following opinions to a reasonable degree of statistical certainty: (1) The Florence County Council's moratorium and related actions had a statistically significant adverse impact on the basis of race in making housing unavailable to Black South Carolinians; (2) The Florence County Council's moratorium and related actions perpetuated residential segregation on the basis of race, denying the potential LIHTC residents the benefits of living in a racially and economically integrated community.

July 25, 2023



Justin Steil

APPENDIX A: CURRICULUM VITAE

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Academic Positions

Massachusetts Institute of Technology, Cambridge, MA 2015-present

Associate Professor of Law and Urban Planning, 2021-present

Class of 1942 Career Development Associate Professor of Law and Urban Planning, 2018-2021

Charles H. and Ann E. Spaulding Career Development Assistant Professor of Law and Urban Planning,
2015-2018

Harvard University, Cambridge, MA 2020-2021

W.E.B. Du Bois Fellow, Hutchins Center, Department of African and African American Studies

New York University Law School, New York, NY 2013-2015

Legal Research Fellow, Furman Center for Real Estate and Urban Policy.

Education

Columbia University Graduate School of Architecture, Planning and Preservation, New York, NY

Ph.D. in Urban Planning, 2015.

Dissertation: Democracy and Discrimination: Analyzing Diverging Local Responses to Immigration

Committee: Peter Marcuse, Susan Fainstein, Stacey Sutton, Clara Irazabal, Olatunde Johnson.

Columbia University School of Law, New York, NY

J.D., 2010.

London School of Economics and Political Science, London, UK

M.Sc. in City Design and Social Science, 2004.

Thesis: “Threshold of Tolerance:” The Forced Dispersal of Asylum Seekers in the U.K.

Harvard University, Cambridge, MA

A.B. in African-American Studies, 2000.

Thesis: Race and the Politics of Youth Imprisonment.

Publications

Books

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(2020) Planning Beyond Mass Incarceration. *Journal of Planning Education and Research* 40(2), 130-138.

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Selected Amicus Briefs, Expert Reports, and Other Publications

Expert Reports

United States District Court for the District of Columbia. 2023. Expert Declaration in *Andersen et al. v. U.S. Department of Housing and Urban Development* No. 23-cv-01259

United States District Court for the Northern District of Ohio. 2022. Expert Reports in *Albert Pickett et al. v. City of Cleveland*, No. 19-cv-02911.

United States District Court for the District of Oregon. 2021. Expert Report in *Total Real Estate Group, LLC. v. Strobe et al.* No. 21-cv-01677.

City of New York. Office of Administrative Trials and Hearings. 2021. Expert Reports in *New York City Commission on Human Rights, ex rel. Watson et al. v. PPC Residential LLC et al.* Index No. 19/2245.

United States District Court for the Central District of Illinois. 2020. Expert Report in *Hope Fair Housing Center v. City of Peoria, Illinois* No. 17 Civ. 01360.

United States District Court for the Southern District of New York. 2019. Expert Reports in *Spooner v. Pelican Management, Inc.; Fordham One Company, LLC; Company, Cedar Two Company, LLC.* No. 18 Civ. 01564.

United States District Court for the Southern District of New York. 2018. Expert Report in *Fair Housing Justice Center, Inc. v. Town of Eastchester* No. 16 Civ. 9038.

United States District Court for the District of Columbia. 2018. Expert Declaration in *National Fair Housing Alliance et al. v. Ben Carson et al.* No. 18 Civ. 1076.

Consulting Expert

United States District Court for the Northern District of Florida. 2022. Consulting in *Oliver Hill et al. v. Tallahassee Housing Authority*, No. 22-cv-225.

United States District Court for the Eastern District of New York. 2022. Consulting in *Kaseim Tripp and Kimberly Rosario. v. Ouriel Aryeh and Elite Connect Real Estate*, No. 21-cv-646.

Amicus Briefs

Commonwealth of Massachusetts Superior Court, Amicus Brief of William Berman, Matthew Desmond, David Robinson, Justin Steil, and the American Civil Liberties Union regarding the Disproportionate Adverse Effect of Eviction on Black Families, in *Mitchell Matorin et al., v. Commonwealth of Massachusetts et al.*, 2084-cv-01344 (2020) (with Esme Caramello and Nicole Summers)

United States Court of Appeals for the Eleventh Circuit, Amicus Brief of International Municipal Lawyers Association and Housing Scholars, in *City of Miami v. Bank of America et al. and Wells Fargo et al.*, Nos. 14-14543, 14-14544 (2018) (with Daniel Traficonte)

United States District Court for the Northern District of California, Amicus Brief of National Fair Housing Alliance, Lawyers Committee for Civil Rights Under Law, Poverty and Race Research Action Council, and Housing Scholars in *City of Oakland v. Wells Fargo, et al.*, No. 15-cv-04321 (2017) (with Daniel Traficonte and Peter Damrosch)

United States Supreme Court, Amicus Brief of Housing Scholars in *Bank of America et al. and Wells Fargo et al. v. City of Miami*, Nos. 15-1111, 15-1112. (2016) (with Alan White)

Comments on Federal Rulemaking

Comment on the Department of Housing and Urban Development (HUD) Proposed Rule: FR-6123-P-02 Affirmatively Furthering Fair Housing, Submitted March 16, 2020 (with Noah Kazis, Sophie House, Matthew Murphy)

Comment on the Department of Housing and Urban Development (HUD) Proposed Rule: FR-6111-P-02 re: HUD's Implementation of the Fair Housing Act's Disparate Impact Standard, Submitted October 18, 2019 (with Peter Damrosch, Somala Diby, and Daniel Traficonte)

Other Publications

Boustan, L. P., Margo, R. A., Miller, M. M., Reeves, J. M., & Steil, J. P. (working paper). Does Condominium Development Lead to Gentrification? (WP 26170). *National Bureau of Economic Research*.

Brennan, M., Dyer, S., Salvia, J., Segal, L., Serino, E., & Steil, J. (2021). Pedestrians and Cyclists Struck in the City of Boston: Patterns and Interventions. Boston Emergency Medical Services.

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Steil, J. (2014) The Challenge of Inequality. *Poverty & Race*.

Steil, J. & Menendian, S. (2014) Responding to Rising Inequality. U.C. Berkeley Othering & Belonging Institute Policy Brief.

Awards

Massachusetts Institute of Technology, Dep't of Urban Studies & Planning Student Council, 2022 Excellence in Advising Award

Massachusetts Institute of Technology, Office of the First Year, 2022 First Year Advising Award.

Massachusetts Institute of Technology, MIT Emergency Medical Services, 2022 John Wu Mentoring Award.

Massachusetts Institute of Technology, 2021 Harold E. Edgerton Award for exceptional contributions in research, teaching, and service.

Massachusetts Institute of Technology, Graduate Student Council, 2021 Frank E. Perkins Award for Excellence in Graduate Advising.

International Municipal Lawyers Association, 2019 Amicus Service Award

Massachusetts Institute of Technology, 2018

Paul Gray Award for Public Service, recognizing “a member of the MIT faculty who exemplifies building a better world” through his or her teaching, research, advising, and service.”

Massachusetts Institute of Technology, Office of Graduate Education, 2018

Committed to Caring Award, recognizing “professors who go above and beyond expectations to make a positive impact on the lives of graduate students.”

Massachusetts Institute of Technology, Dep’t of Urban Studies and Planning Student Council, 2016

Excellence in Teaching Award

Teaching

Term	Course	Title	Units
2022 Fall	11.220	Quantitative Reasoning and Statistical Methods for Planning	12
2022 Fall	11.S967	Laws of the Land: Land Use & Environmental Law	6
2022 Fall	11.A13	Environmental Justice	3
2022 Spring	11.367	Law & Politics of Land Use	12
2021 Fall	11.401	Housing, Community, & Economic Development Policy	12
2021 Fall	11.S967	Laws of the Land: Land Use & Environmental Law	6
2021 Fall	11.A13	Environmental Justice: An Introduction to Civil Rights & Environmental Law	3
2021 Fall	11.S188	Urban Emergency Medical Services	6
2020 Spring	11.367	Law & Politics of Land Use	12
2020 Spring	11.S02	Climate Justice & Cities	3
2019 Fall	11.401	Housing, Community, & Economic Development Policy	12
2019 Fall	11.148	Environmental Justice	12
2018 Fall	11.401	Housing, Community, & Economic Development Policy	12
2018 Fall	11.360	Community Growth & Land Use Practicum	12
2018 Spring	11.469	Urban Sociology	12
2017 Fall	11.401	Housing, Community, & Economic Development Policy	12
2016 Fall	11.148	Environmental Justice	12
2016 Fall	11.401	Housing, Community, & Economic Development Policy	12
2016 Fall	11.S942	Research Design in Housing and Community Development	12
2016 Spring	11.469	Urban Sociology	12
2016 Spring	11.S945	Cities and Immigration	12
2016 IAP	11.S955	Fair Housing and Community Development	3
2015 Fall	11.401	Housing, Community, & Economic Development Policy	12

Advising
Student Thesis Summary

	Total	Completed	In process
Ph.D. as Supervisor	6	2	4
Ph.D. as Reader	13	9	4
M.C.P. as Supervisor	26	24	3
Bachelor's	10	10	0

Memberships

Bar and Court Admissions

New York State Bar; United States Supreme Court Bar; Ninth Circuit U.S. Court of Appeals; U.S. Court for the Southern District of New York.

Professional Associations

American Planning Association; American Sociological Association; Association of Law, Property, and Society; American Association of Geographers; Urban Affairs Association; National Registry of Emergency Medical Technicians.

Selected Work Experience

United States Court of Appeals, Ninth Circuit 2012–2013
 Law clerk for the Hon. M. Margaret McKeown,

United States Court for the Southern District of New York 2011–2012
 Law clerk for the Hon. Kimba M. Wood.

Foreclosure Prevention Proj./S. Brooklyn Legal Services, Legal Intern, Brooklyn, NY Spring 2010
 Conducted legal research and assisted in the preparation of a joint pre-trial order in *Barkley v. Olympia Mortgage*.

ACLU Immigrants' Rights Project, Legal Intern, New York, NY Fall 2009
 Wrote memos on choice of law and standards for civil commitment. Analyzed DHS data on detention.

The Brennan Center for Justice, Legal Intern, Access to Justice Project, New York, NY Summer 2009
 Researched state legal issues regarding First Amendment rights of HIV-AIDS non-profits, prisoners and the census.

Debevoise and Plimpton, LLP, Summer Associate, New York, NY Summer 2009
 Assisted with FCPA and real estate practice. Drafted U-Visa affidavit and memo to limited equity housing coop.

Fair Housing Justice Center, Legal Intern, New York, NY Fall 2008
 Researched discriminatory housing practices by suburban municipalities through FOIL requests, archival research and statistical analysis of housing data. Presented potential cases to E.D.N.Y. U.S. Attorney's Office Civil Rights Chief.

Human Rights Now, Legal Intern, Tokyo, Japan Summer 2008
 Wrote policy papers on refugee resettlement for discussion with the Ministries of Foreign Affairs and Justice.

Youth Ministries for Peace and Justice, Comm'ty Dev't Program Manager, Bronx, NY 2005–2007
 Coordinated neighborhood sustainability planning and executed projects, including green roof construction.

- New Economy Project**, *Advocacy Director*, New York, NY 2004–2005
Coordinated advocacy for New Yorkers for Responsible Lending Coalition relating to state bills to curb abusive tax-refund anticipation loans and prevent deed-theft scams. Worked with Immigrant Financial Justice Campaign.
- Casa Amiga Centro de Crisis**, *Advocate*, Ciudad Juárez, Mexico 2003
Created and led workshops for municipal police to improve their ability to support survivors of sexual violence.
- The City School**, *Program Manager*, *The Prison Project*, Boston, MA 2000–2002
Taught courses for high-school students and prisoners, separately and together, about crime and justice.

APPENDIX B: DISCLOSURES

I testified at depositions in the matter of *Fair Housing Justice Center v. Town of Eastchester*, No. 16-CV-9038 (S.D.N.Y.); *Fair Housing Justice Center v. Pelican Management, Inc.* No. 18 Civ. 01564 (S.D.N.Y.); *Hope Fair Housing Center v. City of Peoria, Illinois* No. 17 Civ. 01360 (C.D. Ill.); *New York City Commission on Human Rights, ex rel. Watson et al. v. PPC Residential LLC et al.* Index No. 19/2245 (City of New York Office of Administrative Trials and Hearings); *Total Real Estate Group, LLC v. Strode et al.* No. 21-cv-01677 (D. Or.); *Albert Pickett et al. v. City of Cleveland*, No. 19-cv-02911 (N.D. Oh.). I was paid at a rate of \$300 per hour for the research and writing of this report.

APPENDIX C: ALTERNATIVE ANALYSES

In the analyses presented above, I based estimates of the racial composition of The Jessamine on available data regarding composition of LIHTC units in Florence County, South Carolina. I based estimates of the racial composition of the single-family homes that could be built on the parcels after the moratorium and rezoning on the racial composition of residents of single-family homes in Florence and Darlington counties with incomes greater than \$50,000. I believe that both of these are conservative estimates of the relevant characteristics. Nevertheless, I conduct here additional analyses using even more conservative estimates from HUD data regarding the racial composition of all LIHTC units in South Carolina and data from the U.S. Census Bureau regarding the racial composition of residents of single-family homes in Florence and Darlington counties, regardless of income.

a. Expected Racial and Ethnic Composition of The Jessamine

The proposed Jessamine LIHTC development would have included 60 units rented at levels affordable to households with incomes at 60 percent of the Area Median Income or below. The average household size in Florence County is 3.3 persons (U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates). At this average household size, the Jessamine would have included approximately 198 residents.

Above, I conducted analyses based on the data gathered from 19 of the approximately 22 occupied LIHTC properties in Florence County, South Carolina indicating that at least 78 percent of all units are occupied by households who identified as Black or African American and 7 percent by white households.¹³

These data from Florence County are broadly consistent with data from the United States Department of Housing and Urban Development (HUD), which indicate that across the more

¹³ For the two properties that provided data individually on all residents as opposed to by unit, I allocated the units according to the composition of the resident population.

than 30,000 LIHTC units in South Carolina, 71.4 percent of residents identified as Black or African American and 21.1 percent as white in 2019, the most recent year for which data are available.¹⁴ Here I conduct alternative analyses using these even more conservative data from HUD. The results here are substantially similar to the results above.

Table A1 summarizes the racial and ethnic composition of the Florence County and South Carolina LIHTC units.

Table A1: Racial and Ethnic Composition of LIHTC Units in Florence County and in South Carolina

	Florence County (all units)	Florence County (units where data on race are reported)
White	0.07	0.08
Black	0.78	0.91

Using this more conservative estimate of the current racial composition of LIHTC units in South Carolina, I calculate the expected numbers of residents of The Jessamine by race.

Table A2: Expected Racial and Ethnic Composition of the Residents of The Jessamine

	Based on Florence County LIHTC Data
White	42
Black	141
Other	15
Total	198

As seen in Table A2, using the data on the racial composition of LIHTC units in South Carolina, we would expect The Jessamine to have 141 Black residents and 42 white residents.

b. Expected Composition of Single-Family Homes

In the analyses above, I conducted analyses using the racial composition of single family home residents in Florence and Darlington Counties with household incomes of at least \$50,000.

¹⁴ See <https://www.huduser.gov/portal/datasets/lihtc/tenant.html>.

Here, I conduct an even more conservative analysis using data from the 2021 5-Year American Community Survey Individual Public Use Microdata Samples (PUMS) for the Florence and Darlington County Public Use Microdata Area (PUMA) indicating that of the residents of all single-family homes built since 2000 in Florence and Darlington Counties, 25 percent of residents identified as Black and 67 percent identified as white.

Table A3 summarizes the racial composition of residents of single-family homes built in Florence and Darlington Counties since 2000, regardless of income.

Table A3: Racial Composition of Residents of Single-family Homes Built in Florence and Darlington Counties Since 2000 (2021 5-Year American Community Survey Individual Public Use Microdata Samples)

	Single-family Since 2000
White Non-Hispanic	0.67
Black Non-Hispanic	0.25
Other	0.08

Using these data regarding the current racial composition of single-family homes in Florence Darlington Counties regardless of income, I calculate the expected numbers of residents of single-family homes built on the site by race.

Table A4: Expected Racial Composition of Residents of Single-family Homes That Could Be Built on the Relevant Parcels

	Single-Family Since 2000
White Non-Hispanic	20
Black Non-Hispanic	7
Other	2
Total	30

- c. Assessing Any Adverse Impact of the Moratorium
 - i. *The Betsey v. Turtle Creek Associates Test*

Adopting an even more conservative approach than the one above and using the state LIHTC composition data and the regional single-family home composition without taking income into account, 95 percent of the potential Black residents would have been adversely affected compared to 68 percent of potential white residents, a difference of 27 percentage points (similar to the 30 percentage point difference in impact in *Betsey v. Turtle Creek Associates*). As seen in Table A5, 141 of the expected Jessamine residents would have been Black, compared to only 7 of the single-family home residents, adversely affecting 95 percent of the Black possible residents of the parcels. By contrast, 42 of the expected Jessamine residents would have been white, compared to 20 of the expected single-family home residents, adversely affecting only 68 percent of the white possible residents of the parcels.

Table A5: Adverse Effect of the Moratorium by Race, Using State LIHTC Composition and Regardless of Income

	Adverse Effect	No Adverse Effect	Total	Adverse Effect
Black	141	7	148	0.95
White	42	20	62	0.68

ii. The Four-Fifths Test

Using the South Carolina data, of 62 potential white residents between the LIHTC project and the single-family homes, 20 would be estimated to be selected for the single-family homes, a selection rate of 0.32. For Black applicants, 7 out of 148 would be estimated to be selected for the single-family homes, a selection rate of 0.05. The impact ratio divides the selection rate for Black applicants (0.05) by that for white applicants (0.32) and finds that a Black applicant's rate of selection is roughly 15 percent that of white applicants, a difference in the selection rates far surpassing the 80 percent threshold

required by the four-fifth's test. The wide difference in the selection rate by race undoubtedly constitutes an adverse effect under the four-fifths test.

Table A6: Four Fifths Test Using South Carolina Data and single-family homes Built Since 2000 Regardless of Household Income

	Not Selected	Selected	Total	Selection Rate
Black	141	7	148	0.05
White	42	20	62	0.32
Total	183	27	211	

iii. The Chi-Square Test

In Table A7, below, I present the contingency tables representing the estimated values, as well as the chi-square value and the p-value, based on data regarding South Carolina LIHTC residents and residents of single-family homes built in Florence and Darlington Counties since 2000 regardless of household income.

Table 12: Chi-Square Test of Independence by Race Using South Carolina LIHTC Data and single-family homes Built Since 2000 Regardless of Household Income

	Adverse Effect	No Adverse Effect	Total	Adverse Effect
Black	141	7	149	0.951
Other	57	22	79	0.717
Total	198	30	228	0.870
x2 stat.	24.85997748	Degrees of Freedom = 1		
pvalue	0.0000006165			

As above, in the chi-square test here the difference between the expected racial composition of the proposed LIHTC units that the County blocked and the single-family homes that the County permits under the revised zoning are extremely unlikely to occur by chance. In other words, the results of the chi-square test here demonstrate with greater than 99.99999% certainty that the difference between the expected number of Black residents in The Jessamine and the expected number of Black residents in any single-family homes built on the site is not by chance.

APPENDIX D: ACADEMIC WORKS CITED

Academic Works Cited

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